7. Melina

Program Name: Melina.java **Input File: melina.dat**

You have made a new friend, Melina. She has trouble counting sometimes, but she recently accepted a job as a cashier at a taco shop. You need to write a program to determine how many different ways she can make the change required by the purchase each customer makes, given the money denominations she has in the cash register.

Input: The input will begin with an integer, `n` (`0 < n <= 1000`), denoting the number of test cases to follow. Each test case will consist of two lines. The first will contain two space-separated floating-point numbers, `a` and `t`, denoting the amount the customer paid, and the amount that was due. The following line will contain an unspecified number of space-separated integers denoting all the possible denominations of money Melina can use to make change, it can be assumed for our purpose that you have access to an infinite number of each denomination. Denominations will never be smaller than `.01` (1 cent), and neither `a` or `t` will exceed two decimal places. Additionally, `a` is guaranteed to be larger than `t`, and the difference between the two will never exceed `10^9`.

Output: For each test case, output the number of possible combinations Melina can make to make the amount of change required by the purchase each customer made.

Sample input:

```
3
25 24.78
.01 .05 .10 .25 1
40 39.15
.01 .05 .10 .25 1
50.26 41.95
.01 .05 .10 .25 1 2 5 10
```

Sample output:

```
9
163
332365
```